Electrical characteristics are guaranteed over the max baseplate temperature range (-40 to 105°C), for the full range of input voltage (V_I), and for the full load range ($I_{o\,min}$ to $I_{O\,rated}$) unless otherwise noted. V_I, V_O, and I_O are actual operating conditions, $I_{O\,rated}$ is nominal rating.

Electrical Specifications — 18.0-75.0V in; 15.0V/5A out

Input Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_I	Input voltage		18	48.0	75.0	V
P_{IL}	No load input power	$V_I = V_{I\,nom}$		0.8		W
C_{IN}	Input capacitance (internal)			6.5		µF
I_I	Input ripple current ❶	$V_I = V_{nom}$, $I_o = I_{o\,rated}$		80		mA p-p

Output Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
$P_{O\,max}$	Total output power ❷			75		W
$V_{O1\,nom}$	Nominal (factory set) output voltage Output 1		14.95	15.00	15.50	V
$I_{O1\,rated}$	Rated output current Output 1	$T_{Baseplate}$ = 105°C			5	A
	Noise and ripple ❸ Output 1	Pk-pk, 20MHz bandwidth with a 0.1µF ceramic capacitor		100	150	mV
V_{O1}	Load regulation ❹	From 10% to 100% of rated output current		0.1	0.5	$\%V_{O1}$
V_{O1}	Line regulation ❹	V_{Imin} to V_{Imax}, $I_O = I_{O\,typ}$		0.1	0.25	$\%V_{O1}$
$I_{O1\,lim}$	Current limit		6.1		7.66	A
	Short circuit current	V_{O1} <2.0V (auto recovery)		10%		

Electrical characteristics are guaranteed over the max baseplate temperature range (-40 to 105°C), for the full range of input voltage (V_I), and for the full load range ($I_{o\ min}$ to $I_{O\ rated}$) unless otherwise noted. V_I, V_O, and I_O are actual operating conditions, $I_{O\ rated}$ is nominal rating.

Electrical Specifications — 18.0-75.0V in; 15.0V/5A out

Output Characteristics - continued

Symbol	Parameter	Conditions	Min	Typ	Max	Units
η	Efficiency ❺	V_I = 12.0 Vdc, $I_O = I_{O\ rated}$ (see eff. graph)	85	86		%
t_{on}	Turn-on time					
		V_I = 0 to V_{Inom}		12		mS
		V_I = 0 to V_{Imin}		15		mS
		V_I = 0 to V_{Imax}		10		mS
	Transient Response					
		positive or negative step				
		I_O = 0% to 100% $I_{O\ rated}$ @ 1A/µs		200	300	µs
		total deviation		4	6	$\%V_{O1\ nom}$

Control Signals -Pins

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{Out}	Output VoltageNEED NEW					
		Remote On/Off pin		15.0		V
		2.5 < V_C < 5.5 or open circuit				
		V_C < 0.8V		0		V
V_{Out}	Output Voltage	Trim Adjust	90		110	%
V_{Out}	Remote sense adustment	$P_{O\ max}$ <75 Watts			5	%

Electrical characteristics are guaranteed over the max baseplate temperature range (-40 to 105°C), for the full range of input voltage (V_I), and for the full load range ($I_{o\ min}$ to $I_{O\ rated}$) unless otherwise noted. V_I, V_O, and I_O are actual operating conditions, $I_{O\ rated}$ is nominal rating.

Electrical Specifications 18.0-75.0V in; 15.0V/5A out

Isolation Characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
	Input to Output	1500Vdc	10			Mohm
	Input to Baseplate	1500 Vdc	10			Mohm
	Output to Baseplate	1500 Vdc	10			Mohm

Thermal Charecteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Units
	Normal Convection	$R_{THETA\ C\text{-}A}$		7.8		°C/Watt
	200 LFM airflow			5.4		°C/Watt
	400 LFM airflow	required for 60°C ambient operation		3.7		°C/Watt
	Panel Mount	Alternate requirement for 60°C ambient operation	70			$inch^2$
	Heat Sink	See Charts				

Notes:

❶ Input ripple current measured with no additional external input filtering.

❷ Total output power of converter may not be exceeded by the trim and or remote sense function increasing V out. The rated power output is based on the V out measurement obtained at the output power pins multiplied by the output current.

❸ Output ripple and noise measured is specified over a 20MHz bandwidth. When testing output ripple it is important to reduce the ground connection for the scope to less than .5”. Output ripple measured with a 10 microfarad tantalum decoupling capacitor.

❹ Line and Load regulation are measured from the (+) remote sense (pin3) and the common (pin 5). Measurements should be taken at the pins in order to eliminate variations caused by line loss due to highly resistive connections.

❺ Because of the nature of high current outputs, efficiency calculations are often made in error. The total power out of the converter is the measurement of the voltage AT THE POWER PIN (5) and the common pin (9) multiplied by the load current. You then divide that number by the measured input voltage AT THE (+) INPUT PIN (4) and the common pin (1) multiplied by the input current draw. Any deviation from the above mentioned method will result in efficiency values much lower than what are actually obtained when measured directly at the converter pins.

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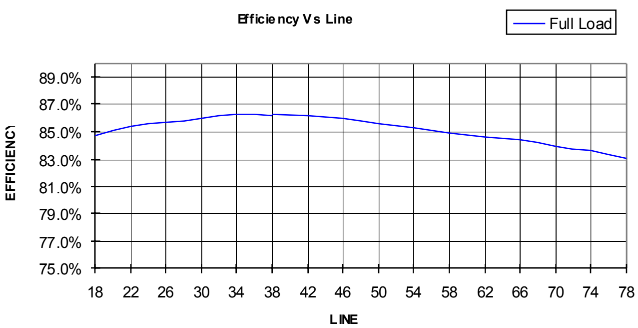
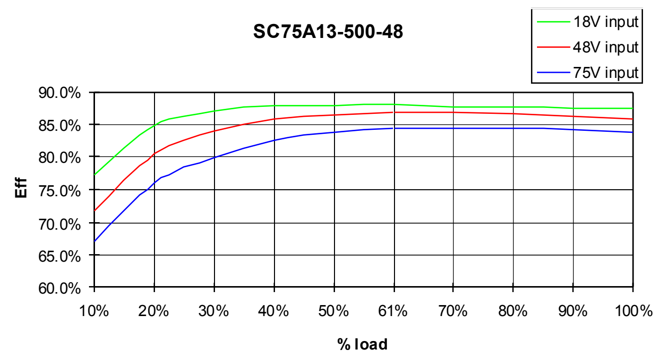
Efficiency Vs. Input Voltage
(Typ)

Figure 1



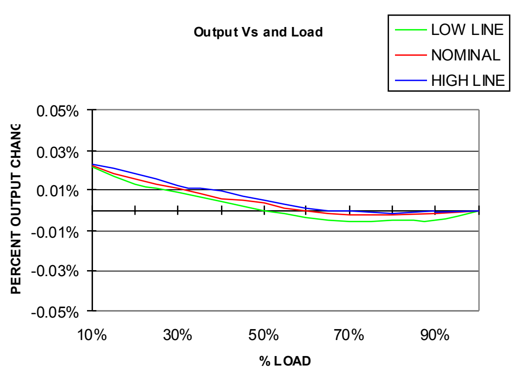
Efficiency Vs Load

Figure 2



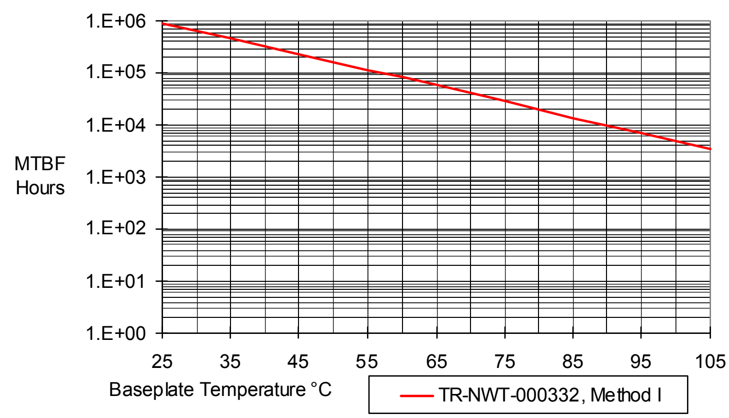
Output Regulation Vs. Loading (Typ)

Figure 3



MTBF

Figure 4



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Heat Sink Selection

Figure 5

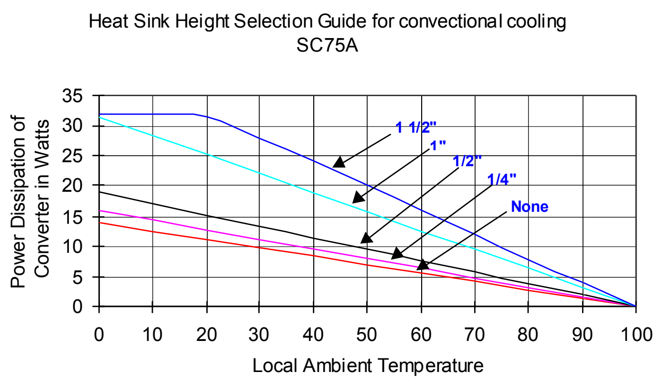
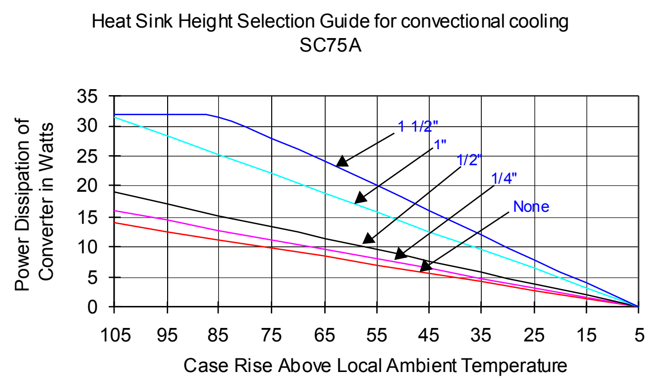
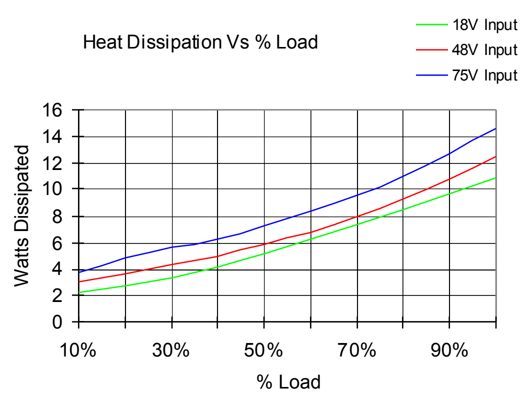


Figure 6



Power Dissipation Vs. Loading (Typ)

Figure 7



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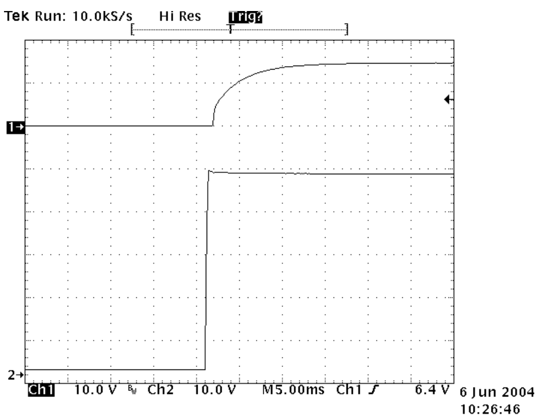
Turn on Characteristics (Typ)

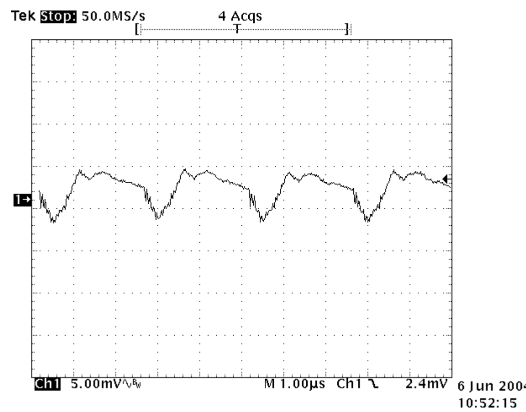
V_{in} = 48.0 Vdc, I_{load} = 15A

Figure 8



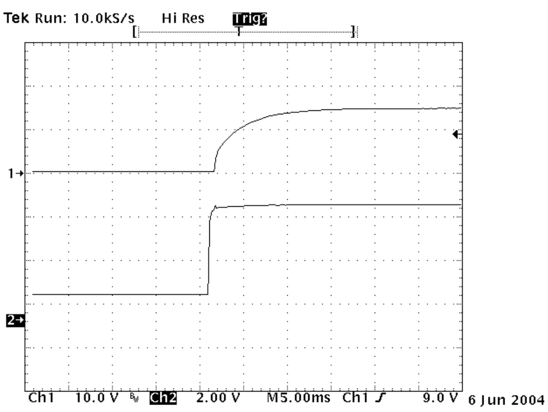
Input Reflected Ripple 10mA/mV

Figure 9



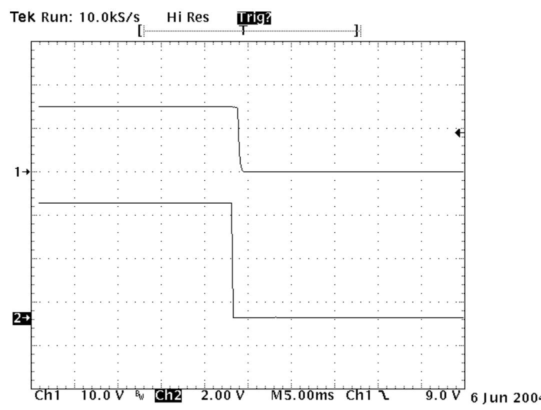
Enable going high

Figure 10



Enable going low

Figure 11



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Ouptput Characteristics (Typ)

Figure 12

Output Ripple

V_{in} = 48.0 Vdc, I_{load} = 5A
100 µf electrolytic across output pins

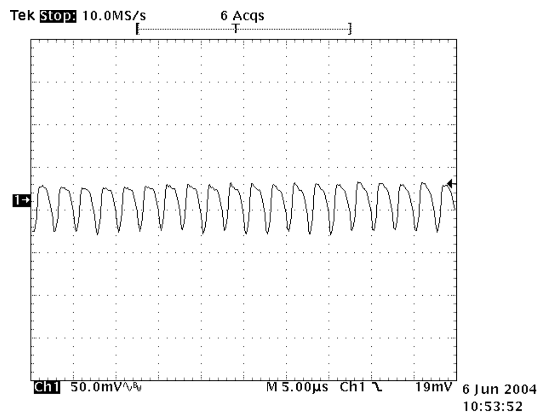
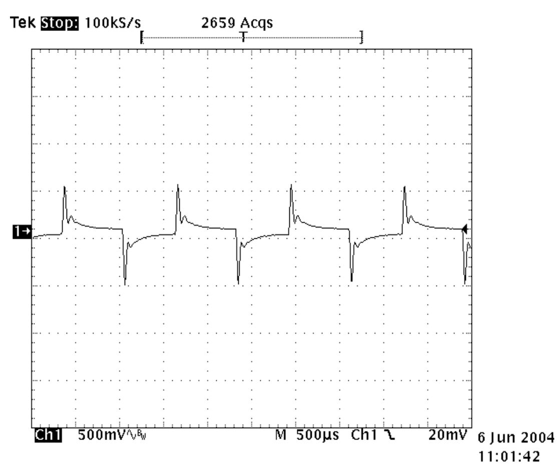


Figure 13

Dynamic Load Response
0%-100% load swing
100 µf electrolytic added to output



PIN CONNECTIONS

1. - Input
2. Case
3. ON/OFF Control
4. + Input
5. + Output
6. + Sense
7. Trim
8. - Sense
9. - Output

PIN Diameters

Pins 1-4, 6-8	0.040 ±0.002
Pins 5,9	0.080 ±0.002

Figure 14